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## **Moodle Performance during October 2010**

Lisa McIver  
Moodle Operations Manager  
Learning & Teaching Enhancement Office  
University of Bath

[l.mciver@bath.ac.uk](mailto:l.mciver@bath.ac.uk)

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### **Information Sheet**

This working paper was written by members of the e-Learning Team at the University of Bath. If you'd like to access other papers, presentations or posters given by the team, see our Online Publications Store. <http://opus.bath.ac.uk/view/divisions/elearning.html>.

If you have any questions about this paper then please contact the author(s) directly.

Thanks to members of the e-Learning Team at the University of Bath who commented on earlier drafts.

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## 1 Introduction

At the beginning of each academic year, the e-Learning Team publish an online survey which is disseminated to all staff and students at the University of Bath. The aim of the survey is to gather levels of user satisfaction in relation to Moodle's performance during (what is arguably) one of the busiest times in the academic calendar. Survey findings are disseminated to the university community and are subsequently used to inform future decision making processes within the team.

The survey (see Appendix 1) applies specifically to Moodle's performance during the first month of the academic year (October 2010) and is available to both staff and students during the November period and focuses on four main areas:

- **Overall** satisfaction levels
- Level of satisfaction as regards the **availability** of the Moodle service
- Level of satisfaction as regards the **responsiveness** of the Moodle service
- Level of **support**

This year's survey ran between 28<sup>th</sup> October and 29<sup>th</sup> November, and was based upon a similar survey that ran the previous year (with a few minor adjustments). Publicity for the survey was through the Moodle Staff Area, the front page of Moodle and also via the Moodle service blog. It should be noted that the respondents were a self-selecting group (and represent a small part of the total number of Moodle users at Bath), so cannot be a truly representative sample.

In total, 169 responses were collected of which 55 (33%) were staff and 114 (67%) were students. This is a somewhat lower response rate than in 2009/10 survey (where a total of 208 responses were received), and as such, any direct comparisons between the two surveys will be difficult.

## 2 Survey Results

Whilst the survey response data is largely quantitative in nature, the survey also provided several opportunities for respondents to provide qualitative feedback. A range of qualitative feedback has been included in this report therefore, and is commented upon where appropriate.

Interestingly, the qualitative feedback suggests that (in some cases) respondents have interpreted the questions in unexpected ways, using the survey as an opportunity to feedback on other issues that they have noted. Where this is the case, the qualitative data is reported and discussed upon in a sub-section of Section 2.1 (Overall satisfaction levels).

### 2.1 Overall satisfaction levels

Overall, the survey results indicate a high level of satisfaction with the Moodle service, with the majority (66.1%) of respondents stating that they were either satisfied or very satisfied with provision (see figure 1). This is a small increase of 6% on the overall satisfaction reported in 2009/10, however whilst any increase is gratifying, the relatively low numbers participating in the survey together with the discrepancy in response rate year-on-year, would make it inadvisable to draw any conclusions from this increase.

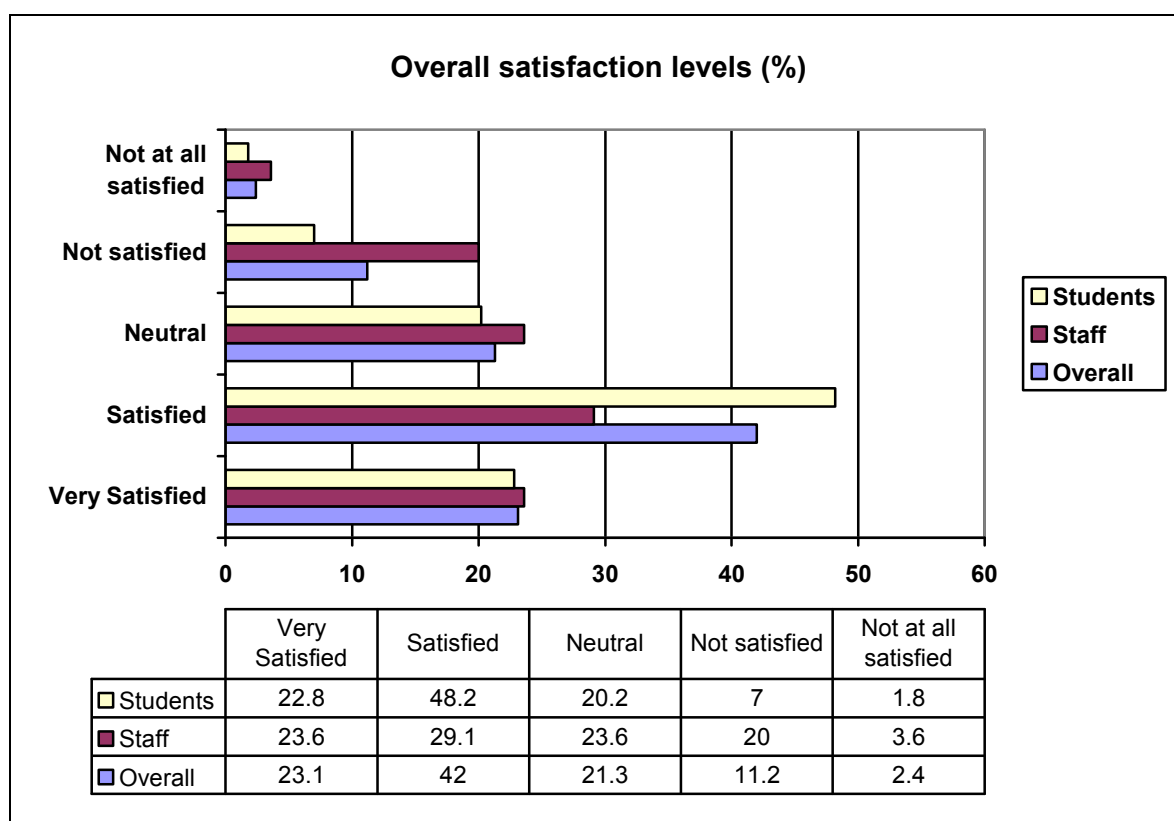


Figure 1

Survey feedback indicates that respondent's satisfaction with Moodle's availability, performance and the associated support levels is generally good, and since there were specific survey questions addressing these areas, they will be covered in detail elsewhere in this report.

The following sections (2.1.1 – 2.1.3) however, refer to areas not explicitly addressed by the survey. There were no questions directly associated with these since the focus of the survey was on to Moodle's ability

to function 'under-pressure' at key times within the academic calendar (in terms of downtime/speed of access etc).

Despite this, sufficient responses were received for these items to have emerged as themes in their own right, and as such, it seems appropriate to touch upon them in this report.

### 2.1.1 General Response to Moodle

Students in particular made use of the survey as an opportunity to communicate their view of an institutional VLE, and the role that it plays in supporting their learning.

*"Extremely important and helpful, turns on the professionalism within!!!" (student)*

*"It is a good tool to use for studying, retrieving information, solutions on exercises, communicating with teachers and other classmates etc." (student)*

*"The Moodle service had helped to overcome (sic) the difficulties in understanding the research (sic) format (sic)." (student)*

Overall, the qualitative data suggests that students are generally appreciative of Moodle and its ability to support the learning and teaching experience, but that whilst they are quick to pick up on the advantages of using such a system, they are equally quick to identify weaknesses with the way in which it is sometimes used.

*"It is extremely useful when used but slightly annoying as some lecturers choose to use it and others do not." (student)*

*"Certain lecturers don't always update regularly." (student)*

### 2.1.2 Usability Issues

Another area that unexpectedly emerged from the survey results was related to the look and feel of Moodle.

Interestingly, several of the more critical comments arose from staff, but overall there were sufficient positive responses (particularly from the students) to provide a counter-balance.

*"It is counter intuitive and I always have troubles (sic). Uploading/correcting many files is a pain." (staff)*

*Not very user friendly, difficult and confusing to navigate. Can and should be a lot more intuitive." (staff)*

*"ait (sic) was available, easy to use, good." (staff)*

*"Very straight forward and self explanatory." (student)*

*"Everything was clearly laid out and there are an impressive number of features." (student)*

*"Easy to view different modules, all information needed laid (sic) out concisely." (student)*

A difference in perception between staff and students is not entirely unexpected, given the different kind of role that they typically adopt within the environment.

A large proportion of Moodle courses at Bath are heavily content driven and these show the students adopting the role of consumer as opposed to contributor. Whilst this may not be the ideal, it does mean that student engagement within Moodle is often limited to navigation through the available resources. Staff however (as the main producers of content), need to be familiar with a variety of administrative interfaces, which may go some way to explaining the discrepancy between their individual responses.

### 2.1.3 Moodle/SAMIS integration

Any unexpected behaviour from Moodle (whenever it occurs), is going to have a detrimental effect upon user perceptions, and although Moodle performed well with regards to its availability and performance speed, there were a number of issues with Moodle/SAMIS integration during the period to which the survey applies. Some of these can be accurately represented as bugs in the system; however others stem from a misunderstanding of what the system can and can't do.

Integration between Moodle and SAMIS is a complicated affair, and as a result there have been several issues this year (both trivial and significant). Undoubtedly however, the issue that was raised the most within the 2009/10 survey relates to the fact that period slot codes are not currently being adhered to. This has meant that students have not necessarily been unenrolled from their previous years units.

*"The fact that last year's students have still not been removed from the participants list is not helpful." (staff)*

*"No evidence of housekeeping done on previous semester, so that units included names of students from last year... I had to delete 'old' students manually, which took time." (staff)*

*"Some minor (sic) issues regarding the correct class lists being aligned with my Moodle courses. Previous years were somehow retained. Problem has been solved though by very helpful support team." (staff)*

Unfortunately, simply reinstating this functionality will not (in all cases) resolve this issue for users, since automatic unenrolment will only occur where users were also added automatically (via the nightly synchronisation with SAMIS). Individuals who were added manually however, will also need to be removed manually (this includes enrolments that were made through the Moodle interface, via course enrolment keys, certain types of enrolments made via the SAMIS block, and some script orientated uploads made by e-learning).

This issue is also complicated by the changing nature of course ownership over time, as the person setting up a course isn't necessarily the person who runs it in subsequent years. Where this is the case, one can see how misunderstandings may occur as to the way in which enrolments were originally set up and will subsequently need to be maintained.

## 2.2 Availability

As stated previously, Moodle did not experience any down-time at the beginning of the new academic year. Indeed, 84% of the respondents replied that they were either happy or very happy with Moodle availability during this period.

As with overall satisfaction levels, this demonstrates an increase on last years satisfaction figures (where 62% of respondents stated that they were either happy or very happy with availability levels). Whilst the two surveys are not directly comparable (due in part to the difference in sample size), the high level of positive responses received this year suggests that the changes that have been implemented since the previous survey have had a positive impact upon the user experience.

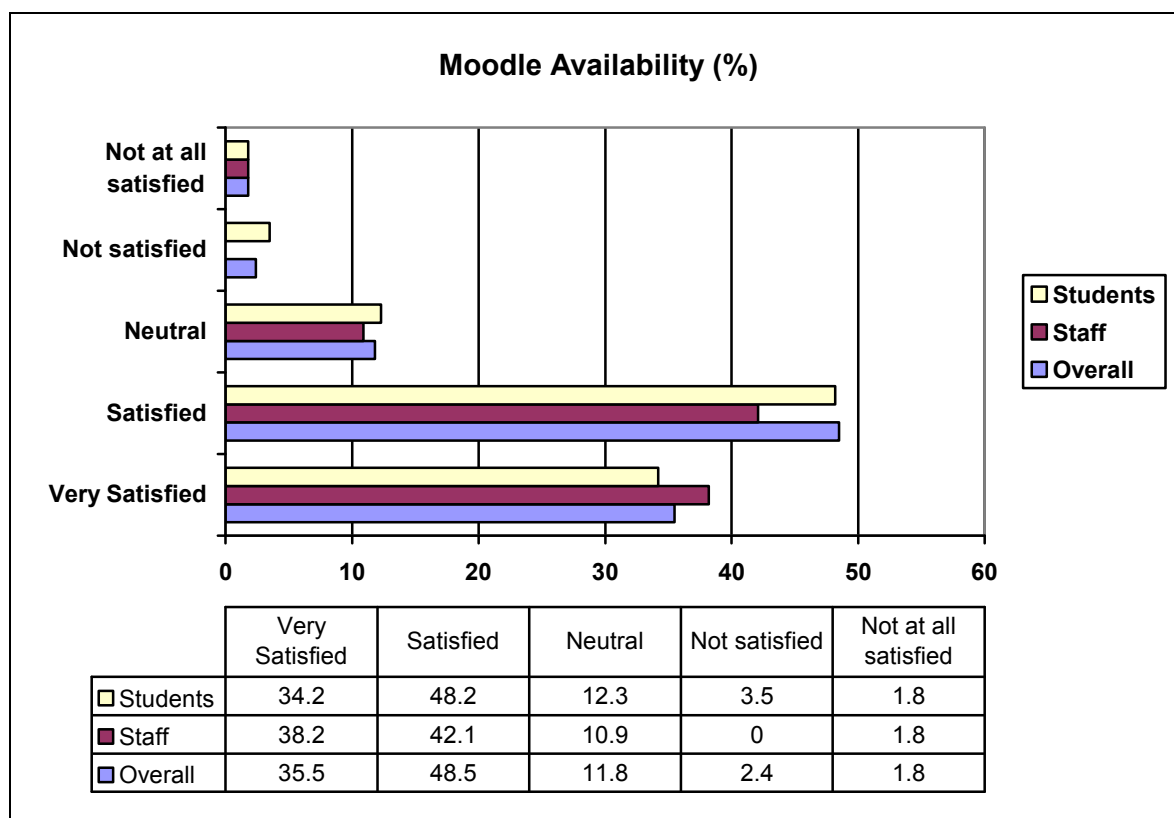


Figure 2

Where users expressed satisfaction with the Moodle's availability, comments included:

*"Service seemed to be up the whole time..." (staff)*

*"Compared to last year, Moodle performance was significantly improved." (staff)*

*"It was up and running from the word go, I was correctly assigned into my courses and had no troubles with it." (student)*

This feedback is particularly pleasing since it reflects a number of changes that have taken place in response to performance issues noted in the 2009/10 survey. In previous years, we have seen several periods of slow or unreliable access, due in the most part to the significant level of activity taking place in Moodle at the beginning of the academic year. We are pleased therefore to note that, despite the environment being far busier than in the previous academic year (see Appendix 2 for details), it was also more robust.



## 2.3 Responsiveness

In previous years, the sheer number of users accessing Moodle at the beginning of the academic year has caused Moodle to struggle, and on some occasions, to crash altogether. This year however, the Moodle service performed well, and to our knowledge, it experienced no issues during this time period as regards performance.

*“No problems with access or time delays when using.” (staff)*

*“Throughout October 2010 the Moodle service has been performing very well, page loading speeds have been consistently good. Apart from one or two very short periods (e.g. 15-30 minutes) where the system was a little bit slow, which were rectified very promptly, Moodle has been performing very well. I tend to be navigating around and editing Moodle sites at least 2-3 hours each day and have found the performance very good.” (staff)*

As this is the case, it is a little disappointing that only 26.6% of respondents stated that they were very happy with the responsiveness of the system. Nevertheless, a significant majority (71%) were satisfied or very satisfied with the responsiveness of Moodle during this time (as opposed to 59% in the previous year).

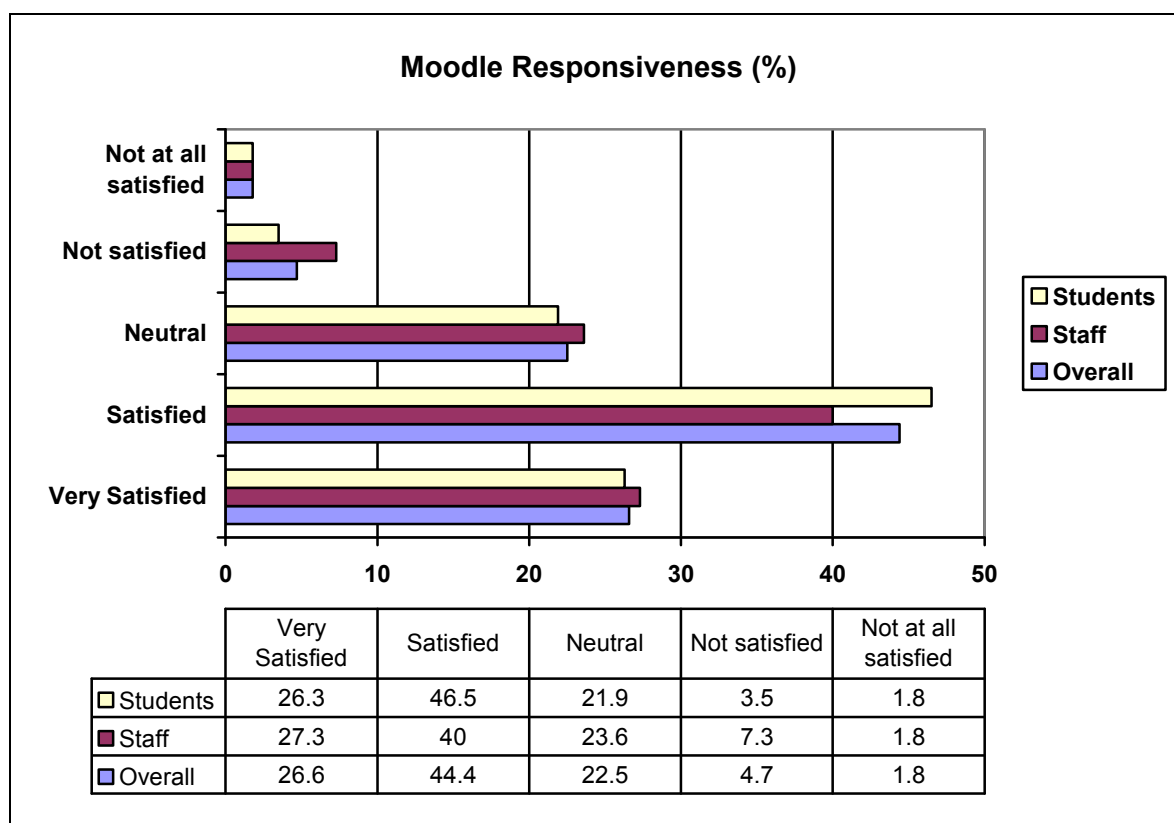


Figure 3

Despite this, a small number of users cited issues with performance as the reason for their lack of overall satisfaction with the service.

*"Sometimes it was very slow, I presume owing to the volume of traffic. But it has calmed down now and is much faster." (staff)*

*"...very slow to access..." (staff)*

*"Slow and unresponsive system." (student)*

During the period with which this survey is concerned however, we received only two reports of performance issues. Upon investigation, Moodle performed as expected for members of the e-Learning Team, and the Moodle logs also looked to be in good health. This would suggest that as far as these reports were concerned, they were likely to have been caused by local issues (perhaps network or hardware related), but of course, these issues were not directly related to the Moodle installation.

Although Moodle may not have suffered in terms of the sheer volume of access requests that it received this year, access to Moodle is no longer granted via LDAP, but instead via single-sign-on. Whilst this change was implemented in order to improve the user experience by bringing Moodle into line with other services at the university, it also makes it vulnerable to any issues that may occur with single-sign-on. Although none of the feedback referenced this explicitly, there was one period where single-sign-on was briefly unavailable, and although it was quickly restored by BUCS, this would have had the effect of temporarily preventing users from logging into Moodle.

## 2.4 Available Support

This was the first time that a question focussing on support levels was incorporated into the survey. In preparing the 2010/11 survey it was felt that it since the level and quality of Moodle support has a significant impact upon users overall perception of Moodle, there was value in gathering feedback in this area.

Overall, respondents were happy with the level of support available, but this varies dramatically between staff and students with 44.7% of staff indicating that they were very satisfied with the support they received compared to only 19% of students (see figure 4, below).

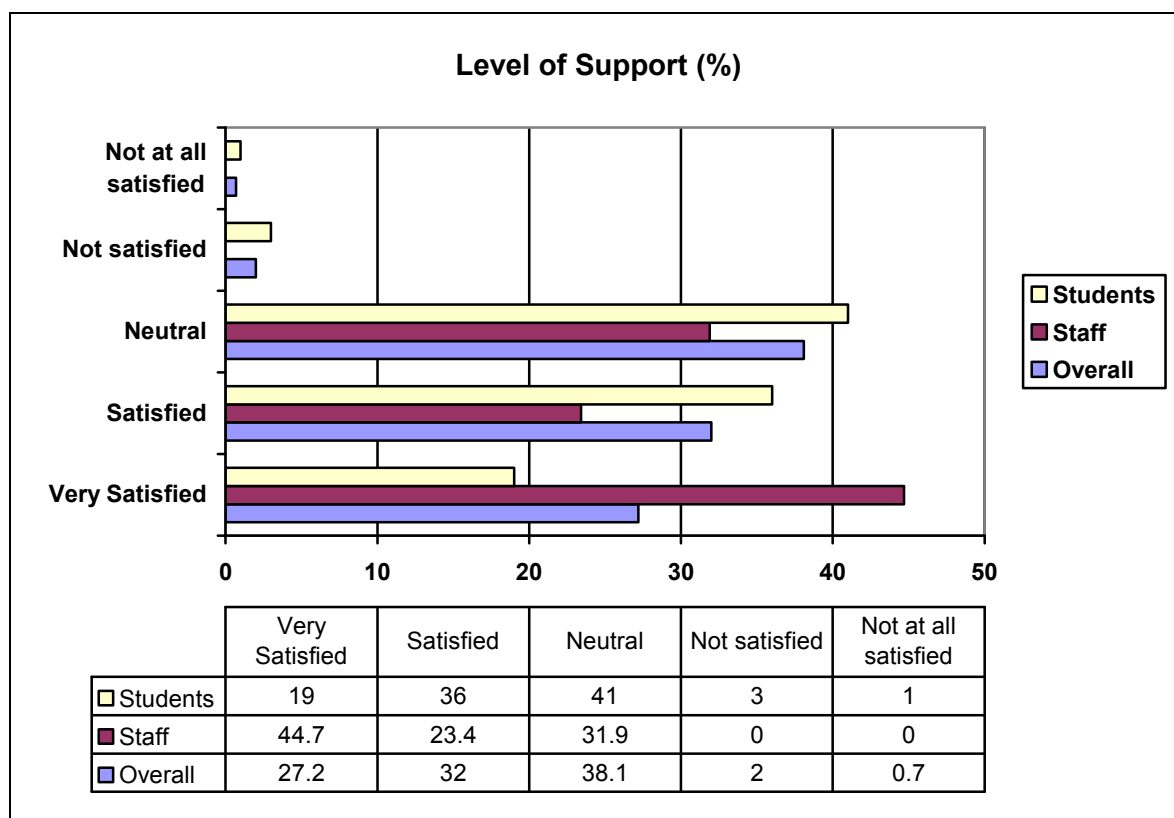


Figure 4

These figures cannot be looked at in isolation without also considering the type of support available to both types of user. Although student support is centrally available (as an option) through the Student Union's SORTED scheme, the majority of students gain Moodle support directly from their lecturers or peers.

This is in direct contrast to the large amount of support that is available to staff (including Online FAQs and 'How To' guides, Case studies, telephone and email helpdesk, face-to-face training and support). Given that this is geared very much to the needs of the academic staff, students rely heavily on their lecturers for assistance, and feedback received from students indicates that this varies greatly across the board.

*"Good induction, easy to understand and navigate one you know how." (student)*

*"Moodle has never been explained to us, we have just been thrown in at the deep end." (student)*

*"I had no idea about it until a teacher mentioned it casually." (student)*

*"I haven't ever really been taught how to use it." (student)*

*"It was well advertised in initial lectures...." (student)*

Overall however, the usability references made by students (section 2.1.2), suggest that in the main, students find Moodle easy to use, and are therefore able to find their way around the environment with limited support.

In contrast, the number of support requests received by the e-Learning Team (primarily from staff) during October 2010 increased considerably upon the same period in the previous year (see Appendix 2). It should be noted however, that these figures do not include support provided by departmental e-learning officers, academic colleagues within departments and other, non-LTEO services, and as such, is only a representative sample of the true amount of support given.

With that in mind, we are particularly pleased to see that no members of staff reported dissatisfaction with support provided at this key time within the academic calendar.

### 3 Conclusion

Following a similar survey in 2009, a number of changes were made to the Moodle service architecture. As a result, users of Moodle for the same period in 2010 benefitted from a more robust environment, despite a significant increase in the levels of use in 2010 (see Appendix 2). Not only was there no down time associated with the load at peak times, but there was no obvious impact upon the speed of service either.

This improvement seems to have had an impact upon satisfaction levels as (whilst recognising that differing respondent numbers year-on-year are not make direct comparisons difficult), there does seem to have been a positive shift in satisfaction levels in the last year.

Overall, feedback suggests that whilst users are broadly happy with the way in which Moodle performed at the start of the academic year, there are clearly opportunities for improvement - in particular, with the Moodle/SAMIS integration. Whilst this issue was outside the original scope of the survey, it is something that clearly needs to be addressed, and will be a feature of future discussions within the team.

In addition, given the fact that the survey has consistently captured data from beyond its original remit, it would seem that there may be value in extending the scope of this survey in the future. As this is the case, we would recommend that future surveys relating to performance at the beginning of the year be replaced with a broader survey designed to capture a wider range of experiences and feedback relating to the entire academic year.

## 4 Appendices

### 4.1 Appendix 1

#### 4.1.1 Survey Questions

1. Which Department/School are you based within?
2. Please specify whether you are a member of staff or a student at the University of Bath
3. Overall, how satisfied were you with the Moodle service during the first few weeks of this term (October 2010)?
  - a. With regards to your previous answer, what factor(s) affected your perception of the Moodle service?
4. How satisfied were you overall with the **AVAILABILITY** of Moodle during the first few weeks of term (October 2010)?
  - a. If you were not completely satisfied, what impact did this have on your studies/teaching?
5. How satisfied were you overall with the **RESPONSIVENESS** of Moodle during the first few weeks of term (October 2010)?
  - a. If you were not completely satisfied, what impact did this have on your studies/teaching?
6. How satisfied were you overall with the level of Moodle **SUPPORT** you received during the first few weeks of this term (October 2010)?
  - a. Please provide details.
7. Are you aware, or have you made use of the Moodle Service Blog (<https://blogs.bath.ac.uk/moodle/>)?
  - a. If you responded 'Yes' to the above question, to what extent has the service blog proven to be useful?
8. If you would like to discuss the performance of the Moodle service with a member of the e-Learning Team, please add your email address.

## 4.2 Appendix 2

### 4.2.1 Key Performance Indicators

	2009	2010	Variance
<i>Moodle Use during the first week of Semester 1</i>			
<b><u>Unique user logins</u></b>			
Day 1	4795	5785	+990
Day 2	4505	6118	+1613
Day 3	4599	5645	+1046
Day 4	4925	6097	+1172
Day 5	3983	4843	+860
<b><u>Number of logins at peak hours</u></b>			
Day 1	800	990	+190
Day 2	1345	1094	-251
Day 3	1335	888	-447
Day 4	861	1040	+179
Day 5	774	899	+125
<i>Support mechanisms during the October 'busy' period</i>			
<b><u>RT requests</u></b> (during October)	267	362	+95
<b><u>Moodle service blog</u></b> (unique visitors)	2297	4010	+1713
<b><u>Moodle FAQs</u></b> (unique visitors)	2706	5973	+3267

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Source: Google analytics, Moodle database, RT reporting

## 4.3 Appendix 3

### 4.3.1 Glossary of Terms

Glossary Term	Definition
Google analytics (p12)	Free Google service capable of generating detailed statistics about the visitors to a website (used for tracking visits, page views etc).
RT (p12)	Request Tracker (RT) is an email tracking system that supports workflow processes associated with individual email requests.
Script orientated uploads (p4)	Manually invoked, automated upload of student cohorts – instigated by the e-Learning Team (usually in response to issues with the Moodle/SAMIS integration)..
SORTED (p8)	Run by the Students' Union, the <u>SORTED</u> training scheme provides training for student on a variety of subjects

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